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NPIC/TSSG/DED-1631-69
27 May 1969

MEMORANDUM FOR: Chief, Technical Services & Support Group
THROUGH : Chief, Development & Engineering Division/TSSG
SUBJECT : TICOF - Plan of Particulars

1. It has come to my attention there is a measure of uncertainty as to how best to proceed with the implementation of Phase II TICOF. I herewith tender my suggestions for resolution of the issue by reviewing the concept of TICOF, as I envision it, and offering for your consideration several recommendations designed to realize a successful research effort. But before I proceed any further, permit me an observation or two as to why I believe that Phase II TICOF has moved off to what might appear to be an apparently slow start (while, in fact, it has been progressing nearly on schedule, as the appended status reports will testify).

2. A recurrent question asked of me (and others, I would imagine) concerns the value and subsequent application of results gained from the initial TICOF effort. In answer to this perfectly valid question, I have responded on several occasions that Phase I TICOF was designed with three primary goals in mind.

a. One was concerned with developing a data base of information on several physical parameters of the 940 and 918 light tables and the Zoom 70 microstereoscope. Such information was gathered to supplement existing information available to the TSSG/DED engineers responsible for exploitation-hardware development. Heavy emphasis was placed upon this aspect of TICOF.

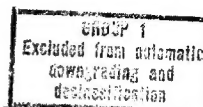
b. The second goal of TICOF was limited to determining the relative amounts of time the several photo interpreter subjects devoted to a select number of exploitation-oriented procedures.

c. Finally, the TICOF concept itself was put to the test. Phrased quite simply, would TICOF be an appropriate vehicle to appreciate how the interpreters function in an operational setting.

3. All these efforts eventuated in a [] document (DK-361, attached) which reports on the findings of the Phase I TICOF exercise. A wealth of data and analyses are provided in the report, and several recommendations are offered to improve PI efficiency. In all instances, the data gathered

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were in response to a specific requirement levied on TICOF by one or more Center components. Planning for TICOF was well coordinated throughout the Center. Little in the way of profound conclusions could be drawn from the results, nor could they legitimately have been expected to be forthcoming. TICOF was limited by the experimental situation, and statements regarding many of the results, especially those having to do with PI procedures, must forever be restricted to the setting from whence they were derived. Generalizations beyond the experimental environment are contingent upon the similarities of the operational components in question.

25X1 4. The TICOF concept has matured to some degree since its inception several years ago by [redacted]. Efforts devoted to the design and fabrication of data collection and storage systems, data analyses in league with the 1969 Final Report (DK-361, attached), and overall program management have led to a more clear appreciation of the benefits (as well as the limitations) to be realized from such a research tool. I deem it appropriate at this time to apply the lessons learned from the Phase I activities and place TICOF in an updated perspective.

5. From my vantage point, I see an immediate need for formal NPIC management sanction of what I consider to be the most effective TICOF managerial organization composed of the following individuals: [redacted]

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[redacted] These individuals have a long association with TICOF. They represent a very broad cross-section of the Center's activities, and I have found that they perform well as a team. Moreover, the composition of the committee is in keeping with the recommendations set forth in the TICOF Task Team report of 3 February 1969 (attached).

6. I further recommend that this group be explicitly charged with responsibility for recommending and approving the equipment and procedures to be evaluated, developing, or causing to be developed, the hard- and soft-ware for data selection and analyses, designing experimental procedures, recommending and approving the personnel required to maintain the research effort, and apprising Center officials of the results of the research as well as the conclusions drawn therefrom.

7. In addition, I recommend that the TICOF Committee continue to seek and remain cognizant of advice from NPIC management, from other Center personnel, and from contractors, when designing TICOF test plans. Final approval of proposals should continue to rest with the Executive Director, NPIC.

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8. The proposed Phase II TICOF is thoroughly documented (see attachments), and I concur with the TICOF Task Team's recommendation that they be implemented as soon as the necessary equipment becomes available.

9. A considerable amount of fact-finding and coordination went into TICOF test plans, and I seriously doubt that they could be substantially improved upon, with but two exceptions.

(a) TICOF to date has concentrated on hardware evaluation in an operational setting. Such an approach is, and shall continue to be valid. If I may be permitted to editorialize, it is my considered opinion that no method is more feasible than TICOF to gather this information in a systematic and relatively unobtrusive manner. However, I personally feel that TICOF should be somewhat more responsive to management's concern with PI procedures-oriented problems than it has been in the past. Studies concerned with the amount of time required to exploit each target and frame [redacted] as well as the Chip Study, which were conducted by a questionnaire technique, could have been handled largely in TICOF were "remote response consoles" (RRCs) available (see document NPIC/TSSG/DED-1482-69, dated 22 January 1969, attached, which describes the rationale behind the request to develop the "RRCs"). As noted in document TSSG/ESD/TEB-16-69, 19 May 1969, two prototype consoles have been fabricated and are ready for evaluation.

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Recent conversations with PPBS, TSSG/PPS, and IEG/OSS personnel indicate that development of the RRCs should continue, since each office provided me with a list of candidate questions answerable at least in part by such an approach (see attachments). It should be recalled from earlier discussions that full deployment of 60 or more consoles would permit an extensive sampling of Center personnel and their activities, thereby overcoming the major limitations inherent in the present TICOF configurations. Moreover, the RRCs have been designed to be highly flexible in terms of the types of problems to which they can be addressed. Finally, this approach will permit greater utilization of TICOF, since dependence upon availability of hardware to be tested will be lessened. As noted in NPIC/TSSG/DED-1588-69, 14 April 1969 (attached), non-availability of equipment has prompted me to seek a postponement in the 1 June TICOF start date.

We have now reached a point in development where it is necessary to test the RRC prototypes. I therefore specifically request permission to place the consoles in an operational setting (IEG/WGB) for evaluation. [redacted] is best prepared to oversee installation, maintenance, and redesign of the units, if necessary. On the basis of this evaluation, a decision can be made as to the feasibility of expanding RRC

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development to its fullest potential. Note that this exercise will not interfere with TICOF activities if the slippage in the start date referenced above is acceptable. In addition, there is no reason that I can see why the recently designed and/or redesigned light table and microscope sensors cannot be tested at the same time.

(b) The second exception to the present TICOF plan to which I referred earlier concerns the role of TICOF in the test and evaluation of new equipment. Up until now, TICOF has been utilized "after the fact" on production items. The data so gathered did lay the ground work for some hardware development, but I should think that TICOF could provide invaluable, supplemental information to TSSG/ESD in terms of the T&E of prototype equipment. Therefore, I recommend that, where possible, TICOF be included as part of the Center's T&E cycle.

10. In summary, I submit the following recommendations for your approval:

- a. TICOF Management Committee, as described
 - b. TICOF Management Committee responsibilities, as described
 - c. TICOF Management Committee sources of guidance, as described
 - d. Greater TICOF concern for performance measures, especially the further development of "remote response consoles," as described
 - e. Inclusion of TICOF in the T&E cycle, when appropriate.
11. I should be pleased to discuss my recommendations with you.

Attachments:

See attached listing

CONCURRENCE:

Chief, Development & Engineering Division/TSSG

Date

Distribution:

Orig - Addressee

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1 - NPIC/TSSG/DED files

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LIST OF ATTACHMENTS

PSG/AID Memorandum for the Record, 20 March 1969
NPIC/TSSG/DED01515-69, 26 March 1969
TSSG/ESD-21/69, 27 March 1969
TSSG/ESD-25-69, 3 April 1969
PSG/AID-237/69, 21 May 1969
IEG-49-69, 3 February 1969
NPIC/TSSG/DED-1482-69, 22 January 1969
TSSG/ESD/TEB-16-69, 19 May 1969
NPIC/TSSG/DED-1588-69, 14 April 1969
TICOF Image Proposals (2 of 3)

Technical Task Reports:

DK 361
DK 228-2
DK 345
DK 229
DK 229-1
DK 336
DK 336-1
DK 412
DK 413
DK 414

Others

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